

REMARKS

Applicants express appreciation to the Examiner for the in-person interview granted to applicants' representative. As presented herein for reconsideration, the claims have been amended as proposed and discussed at the interview. In particular, independent claim 1 and depending claims 2 – 8 and 13 have been amended, dependent claims 9 – 12 have been cancelled without prejudice, and independent claim 48 has been cancelled and replaced by new independent claim 49.¹ Thus, by this paper, claims 1 – 8, 13 and 49 are presented for reconsideration. The independent claims are claim 1, directed a method, and claim 49, directed to a corresponding computer program product.

As presented herein for reconsideration the claims are directed to a method and a corresponding computer program for configuring a scheduling server computer so that it may be used by any of a plurality of business computing systems for scheduling appointments to do a particular job as configured by an operator at any of the business computing systems for different types of business entities. As defined by the independent claims, the method is comprised of steps for receiving at the scheduling server computer operator input from one of the business computing systems of one or more of the different types of business entities, the operator input comprising data that identifies for a particular business entity one or more services provided by that business entity, data that identifies a time dependency of each service needed to perform a particular job, and data that identifies a resource dependency of each service needed to perform each job. The claimed time dependency comprises a length of time required to perform the service, and when the service depends on the prior performance of other related services, the time dependency includes a length of time for performing those prior related services, as well as requiring that at least some services needed to perform the particular job must be carried out either sequentially or in parallel.² The resource dependency comprises a listing of the resources required to perform the service.

¹ Any amendments to claims other than those which are expressly relied upon in overcoming the rejections on art have been made simply to insure consistency in claim language, to correct typographical or grammatical errors, or to correct other errors of a formal, non-substantive nature, but not to otherwise narrow the claims in scope for any reason.

² This particular language was included in the independent claims by incorporating the subject matter from dependent claims 9 and 10, as discussed at the interview, and as suggested for consideration by the Examiner.

The method next recites receiving at the scheduling server computer operator input from any of the business computing systems of the different types of business entities, the operator input comprising data that identifies for a particular business entity a time availability of each resource that can be used to perform each service needed to perform each job.

Next, the scheduling server computer uses the data input from the operator to automatically create a plurality of proposals for each business entity using the scheduling server to configure its appointments, the proposals specifying when each job as configured by the operator might be scheduled during a defined time period, the plurality of proposals being created as a function of the time availability of each resource that can be used to perform each service needed to perform each job and the time dependency of each service. At least one resource and at least one service can be included in any number of the plurality of proposals for a particular business entity at the same time availability, each proposal indicating a time instance at which each job can be initiated during the defined time period, and each job having a plurality of associated proposals.

After the plurality of proposals for the different business entities have been created by the scheduling server computer, either an operator at a business computing system or a customer at a customer computing system logs onto the scheduling server computer and inputs data which identifies a desired time for starting an appointment to do a particular job at a particular business entity. Based upon the input data identifying the desired time for starting the appointment to do the particular job at the selected business entity, the scheduling server computer automatically selects one of the plurality of proposals that are associated with the particular job in order to use the selected proposal to make an appointment for doing the particular job at the particular business entity.

The scheduling server computer then automatically associates the corresponding resources required for the selected proposal with the appointment and then tags the resources so that thereafter they are identified as being unavailable for other proposals used for making appointments at the particular business entity.

The scheduling computer then automatically revises one or more other proposals in response to the selected proposal used to make the appointment for doing the particular job. And lastly, the revising of the one or more other proposals includes revising the one or more other proposals so as to remove from the one or more other proposals any of the tagged resources no

longer available due to making the appointment for doing the particular job, and then also eliminating any of the one or more other proposals which cannot be revised due to the tagged resources no longer being available.

Applicants' claimed invention thus provides a highly flexible and versatile tool which can be used by any one of several different business entities to customize the parameters needed for scheduling an appointment with a particular business based on the special needs and parameters of the jobs that may be scheduled for that business, including the available resources (e.g., personnel, equipment etc.) and time requirements for using those resources to schedule the job.

In the current non-final Action claim 1 and depending claims 2 – 13 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner noted that “to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.” Claim 1 has thus been amended consistent with the guidance provided by the Examiner. For example, claim 1 now recites steps for

“(a) receiving *at the scheduling server computer . . . data* that identifies for a particular business entity one or more services provided by that business, *data* that identifies a time dependency of each service needed to perform a particular job, and *data* that identifies a resource dependency of each service needed to perform each job. . . ;

(b) receiving *at the scheduling server computer . . . data* that identifies for said particular business entity a time availability of each resource that can be used to perform each service needed to perform each job;

(c) *the scheduling server computer thereafter using the data input from said operator to automatically create for each particular business entity which has input data for configuring the scheduling of its jobs, a plurality of proposals* for each business entity that specify when each job as configured by the operator for each business entity might be scheduled during a defined time period, the plurality of proposals being created as a function of the time availability of each resource that can be used to perform each service needed to perform each job and the time dependency of each service . . . ;

(d) *after the plurality of proposals for each business entity have been created by the scheduling server computer, either a business computing system or a customer computing system logging onto the scheduling server computer and inputting data which identifies a desired time for starting an appointment to do a particular job by a particular business entity;*

(e) *based upon the input data identifying the desired time for starting the appointment to do the particular job by the particular business entity, the scheduling server computer automatically selecting one of the plurality of proposals that are associated with the particular job in order to use the selected proposal to make an appointment for doing the particular job by the particular business entity;*

(f) *the scheduling server computer then automatically associating the corresponding resources required for the selected proposal with the appointment and then tagging the resources so that thereafter they are identified as being unavailable for other proposals used by the particular business entity; and*

(g) *the scheduling computer then automatically revising one or more other proposals in response to said selected proposal used to make said appointment for doing the particular job at the particular business entity, the revising of the one or more other proposals including,*

revising the one or more other proposals so as to remove from the one or more other proposals any of the tagged resources no longer available due to making the appointment for doing the particular job at the particular business entity, and

eliminating any of the one or more other proposals which cannot be revised due to the tagged resources no longer being available.” (Emphasis added).

It is clear that claim 1 as amended positively recites “the thing or product” to which it is tied (a computing network which includes the scheduling server computer, and its interaction with business and/or customer computing systems), as well as the “subject matter that is being transformed” (e.g., the data input by an operator at a business computing system to “configure the scheduling computer so that it may be used for . . . scheduling appointments to do a particular job as configured by an operator at any of the business computing systems.”). As noted by the Examiner in the Interview Summary, “Applicants’ proposed amendment to claim 1

overcomes the 101 rejection." Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

The only other rejection of record in the Office Action was rejection of Claims 1-6, 8-12 and 48 under 35 U.S.C. § 103(a) as being obvious over U.S. Pat. Publication No. 2004/0162811 (Wetzer et al.) in view of U.S. Patent No. 5,913,201 (Kocur), U.S. Patent No. 7,346,531 (Jacobs) and certain points as to which Official Notice has been asserted.³ Claims 7 and 13 were rejected under 35 U.S.C. § 103(a) as being obvious over Wetzer as combined with Kocur, Jacobs, and further in view of U.S. Pat. Publication No. 2005/0027580 (Crici et al.).⁴

Wetzer et al. describe a method that is directed to "managing maintenance of equipment [and more particularly to] managing maintenance of equipment by a maintenance, repair and overhaul (MRO) business . . ." ¶ [0001]. The method described by Wetzer et al. begins with a step for establishing a configuration definition database which is used to define the configuration of one or more end items of equipment requiring maintenance. ¶ [0018]. Next, a maintenance

³ These include (1) associating appointments by customer, (2) associating blocks of time with the job scheduled to be done in that block of time, (3) assigning different priorities to resources, (4) conserving valuable resources by substituting less valuable and more plentiful resources, and (5) eliminating infeasible proposals, such as those that cannot be fulfilled by available resources. Beginning in the first Office Action (June 15, 2006) and since that time, point (1) has been cited against claim 2, point (2) has been cited against claim 4, and points (3) and (4) have been cited against claim 6. Point (5) was cited against limitation (f) of claim 1 (later re-designated as limitation (g) in Amendment C and later amendments of claim 1) beginning in the third Office Action (April 19, 2007) and continuing since that time.

In the response to the first Office Action applicants, in the traversal of the rejections on art, noted that "In the interest of reducing the complexity of the issues . . . the following discussion focuses on amended independent claim 1." Amendment A, p. 9. Applicants also noted that "claims 2, 4, 6 . . . are patentable for *at least* the same reasons as the independent claims . . ." Id at p. 11 (emphasis added).

In Amendment B, in response to the Examiner's reassertion of Official Notice in the second (final) Office Action, applicants' response (Amendment B) stated "to the extent that the Examiner has relied on any Official Notice . . . Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with other art of record." Amendment B pp. 7 – 8. Subsequent responses filed by applicants continued to reiterate that applicants did not acquiesce in the points of Official Notice. As recently as Amendment E, the last amendment filed, applicants stated that the distinguishing features argued relative to claims 1 and 48, the independent claims, while overcoming the references cited, "should not be construed as Applicant acquiescing to any of the purported teaching or assertions made in the last action regarding the cited art or the pending application, *including any official notice.*" Amendment E p. 10.

Applicants have continued throughout prosecution of the application to focus principally on amending the claims in an endeavor in good faith to distinguish them over the cited references, particularly the primary reference relied upon, Wetzer et al. But that does not mean that applicants necessarily agree that by focusing the arguments principally in that manner to expedite and simplify resolution of the issues, that applicants have overlooked or admitted the assertions in the Official Notice, as noted above.

⁴ Since Wetzer et al., Jacobs and Crici et al. qualify as "prior" art, if at all, under 35 U.S.C. 102(e), applicants reserve the right to challenge the status of any of those references as qualifying "prior" art. Accordingly, any statement or comment herein to any of those references is made merely for purposes of argument, and assumes *arguendo* that such references are proper qualifying prior art.

task database is established, which describes maintenance tasks to be performed within a specified time window for an end item based on its configuration. ¶ [0021]. The method next incorporates emergent work into the maintenance task database at the appropriate time window within which it is to be performed. During the course of a given maintenance activity, other sub-elements in need of repair may be identified, hence these "emergent" or unplanned tasks are then sequenced into the planned maintenance tasks identified from the maintenance task database. ¶ [0022]. The next step is to determine the resource requirements for each maintenance task in the maintenance task database. Resource requirements include labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task. ¶ [0023]. The method then determines the resources available for a specified time window. ¶ [0027]. Lastly, the method obtains maintenance execution status (e.g., identifying the status of the end items currently undergoing maintenance) (¶ [0028]), develops activity based cost models, develops a preliminary resource plan that is then optimized, and then allocates transactions or assignments. ¶¶ [0029 - 0034].

Moreover, Wetzer et al. do not describe anything which describes or suggests⁵

"(c) the scheduling server computer. . . using the data input from said operator to automatically create for each particular business entity which has input data for configuring the scheduling of its jobs, a plurality of proposals for each business entity that specify when each job as configured by the operator for each business entity might be scheduled during a defined time period, the plurality of proposals being created as a function of the time availability of each resource that can be used to perform each service needed to perform each job and the time dependency of each service . . . ;

(d) after the plurality of proposals for each business entity have been created by the scheduling server computer, either a business computing system or a customer computing system logging onto the scheduling server computer and inputting data which identifies a desired time for starting an appointment to do a particular job by a particular business entity;

⁵ Indeed, the Office Action at pp. 11 – 13 states that "Although *not* explicitly taught by Wetzer et al. . . .", then noting in particular language from claim 1 as set forth in Amendment E, language from imitations (c), (e), (f) and (g). Thus, on the basis of even the claim language *prior* to the further amendments herein, the Examiner concedes that these limitations of the claim are not found in Wetzer et al.

(e) *based upon the input data identifying the desired time for starting the appointment to do the particular job by the particular business entity, the scheduling server computer automatically selecting one of the plurality of proposals that are associated with the particular job in order to use the selected proposal to make an appointment for doing the particular job by the particular business entity;*

(f) *the scheduling server computer then automatically associating the corresponding resources required for the selected proposal with the appointment and then tagging the resources so that thereafter they are identified as being unavailable for other proposals used by the particular business entity; and*

(g) *the scheduling computer then automatically revising one or more other proposals in response to said selected proposal used to make said appointment for doing the particular job at the particular business entity, the revising of the one or more other proposals including,*

revising the one or more other proposals so as to remove from the one or more other proposals any of the tagged resources no longer available due to making the appointment for doing the particular job at the particular business entity, and

eliminating any of the one or more other proposals which cannot be revised due to the tagged resources no longer being available.”⁶ (Claims 1 and 49, emphasis added).

Kocur, on the other hand, describes a “computerized method of assigning workers to a plurality of work-projects, utilizing linear programming” Abstract. The linear programming “forecasts the adequacy of the workforce, assigning workers so as to maximize scheduling of appointments while minimizing the aggregate travel time of workers to reach the work-project sites.” Abstract

⁶ In addition to these differences, applicants also note that Wetzer has simply been incorrectly applied in how it assertedly reads on certain claim limitations. For example, the Office Action refers to the maintenance tasks disclosed by Wetzer as somehow interchangeably teaching that such tasks are both a “service” and a “job” within the meaning of the claims. Applicants respectfully submit that is an improper reading of Wetzer. For instance, Wetzer discusses optimizing a plan for scheduling maintenance by selecting a priority of tasks to be done, but if a task as taught by Wetzer corresponds to a “service”, as proposed in the rejection of element (a) of claim 1, then Wetzer cannot teach the claim elements where “services” are recited as a subset of a “job.” In other words, a “task” as taught by Wetzer cannot read on both a “service” and a “job” inasmuch as the claims recite that a “job includes multiple services.” Such a reading of Wetzer is simply logically inconsistent and not sustainable as supporting a proper *prima facie* case.

Kocur fails to teach or suggest that resources can be assigned to multiple proposals having the same time availability and that input is received specifying a desired start time. While Kocur teaches that workers can be allocated to multiple work projects and that work-projects are divided among workers, Kocur does *not* teach that the workers (resources) can be assigned to multiple work projects (proposals) at the *same time availability*. Kocur has no reason to assign a worker to multiple work projects with the worker working at both projects at the same time, since this is simply not possible.

Jacobs describes scheduling complex work orders for a mobile workforce. Abstract. Complex work orders are comprised of sub-orders that require coordinated scheduling because the start of one sub-order is dependent on the start or completion of another. Jacob's method thus identifies a set of member sub-orders required for completing complex work orders and relates those sub-orders to one another by precedence criteria that establish which sub-orders are dependent on which other sub-orders. In effect, Jacobs merely sets a hierarchical priority for completing sub-orders in a required logical order so that a workforce is assigned to the sub-orders in accordance with the precedence criteria. Abstract.

Notably, there is nothing in Wetzer et al. or any of the other prior art of record⁷ that describes the configuring a scheduling server computer by any of a plurality of different business entities to permit customized scheduling configurations for appointments as used by each different entity. Additionally, none of the references, either singly or combination, teach or in any way suggest "*(g) the scheduling computer then automatically revising one or more other proposals in response to said selected proposal used to make said appointment for doing the particular job at the particular business entity, the revising of the one or more other proposals including, revising the one or more other proposals so as to remove from the one or more other proposals any of the tagged resources no longer available due to making the appointment for doing the particular job at the particular business entity, and eliminating any of the one or more other proposals which cannot be revised due to the tagged resources no longer being available.*" (Claims 1 and 49, emphasis added).

⁷ Applicants also note that the only remaining applied reference, Crici et al., which was applied to some dependent claims, also fails to compensate for the inadequacies mentioned above with regard to Wetzer, Kocur and Jacobs. In fact, Crici et al. was not cited for teaching any of the foregoing limitations of claims 1 and 49. Rather, Crici et al. was only cited for disclosing the time availability of resources and the times in which a resource is not available.

While, as an abstract proposition, eliminating "infeasible proposals" (Office Action, p. 14 – Official Notice) would seem to be common sense, that is far different than the claimed limitation of using a scheduling computer to automatically revise one or more other proposals in response to a selected proposal which locks out resources, and updating the other proposals so as to either update them based on resources that *remain* available, or else temporarily disable them due to unavailable resources. This claim limitation simply does not read on the subject of the asserted Official Notice, even if it is taken as admitted prior art, for the reason noted, nor is it taught or suggested in any of the prior art or record.

As noted in the summary prepared at the conclusion of the interview, "Independent claims 1 and 49, which focus more particularly on how different business entities can configure the scheduling server for their individual businesses, appear to differentiate the claims over the art in a much better way." Thus, for at least the foregoing reasons, the claims are believed to be patentable over the prior art of record does not, and accordingly favorable reconsideration and allowance of the pending claims is respectfully requested.

In the event that the Examiner finds any remaining impediment to allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 17th day of October, 2008.

Respectfully submitted,



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